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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,853	02/05/2004	Thomas Sandgaard	007189-5	6536

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THE MCCALLUM LAW FIRM, LLC  
132 KOLAR COURT  
ERIE, CO 80516

EXAMINER
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GREENE, DANA D

ART UNIT	PAPER NUMBER
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3762

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,853

Applicant(s)

SANDGAARD ET AL. ✓

Examiner

Dana D. Greene

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/8/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 10-12, 14-20, and 25 stand rejected under 35 U.S.C. §102(b) as being anticipated by Cohen et al. (US 2002/0161415 A1, hereinafter "Cohen"). With reference to claims 1 and 25, Cohen is considered to disclose:

a method of prompting the individual to attempt to contract an impaired muscle (see col. 1, para. 005, Cohen). The disclosed method of causing contraction is considered to anticipate the claimed method of prompting muscle contraction because both methods advocate an attempt to contract an impaired muscle which can be detected by picking up an electrical signal/impulse at the location of the muscle;

detecting an electrical signal within the impaired muscle using electrodes placed on the individual's skin near the impaired muscle (see col. 4, para. 0027, Cohen). The disclosed method of detecting signals through sensing electrodes is considered to anticipate the claimed method of detection because both detect weak signals that cause the device to send electrical impulses to an electrode attached to the skin adjacent to the affected muscle;

transmitting the electrical signal to a microprocessor (see col. 4, para 0031, Cohen). The disclosed method is considered to anticipate the claimed method of

transmitting the electrical signal to a microprocessor because both can receive the signal without the need for direct contact between the sensor and microprocessor;

checking the pattern of the electrical signal against a mathematical algorithm (see col. 9, para. 0079, Cohen). The disclosed method of checking is considered to anticipate the claimed method because both methods teach the programming of the microprocessor with an algorithm to recognize whether an impulse exceeds a specific threshold;

determining whether or not an attempt to move the impaired muscle has been made (see col. 1, para. 005, Cohen). The disclosed method of causing contraction is considered to anticipate the claimed method of prompting muscle contraction because both methods advocate an attempt to contract an impaired muscle which can be detected by picking up an electrical signal/impulse at the location of the muscle;

measuring the strength of the electrical signals (see col. 9, para. 0080, Cohen). The disclosed method is considered to anticipate the claimed method of measuring the strength of the electrical signals because both techniques measure the strength of the impulses against a threshold value and if an impulse exceeds the threshold value, a current is sent to the electrodes causing the muscle to contract;

sending an electric current to an electrode in contact with the individual's skin to cause muscle contraction if the strength of the electrical signal is larger than a first threshold value (see col. 9, para. 0079 and col. 9, para. 0080, Cohen). The disclosed method of sending electric current is considered to anticipate the claimed method because both methods teach the programming of the microprocessor with an algorithm

to recognize whether an impulse exceeds a specific threshold and if an impulse exceeds the threshold value, a current is sent to the electrodes causing the muscle to contract.

Referring to claims 2, 16, and 17, Cohen is considered to disclose:

the step of displaying the strength of the electrical signal on a visual display (see col. 5, para. 0031 and col. 12, para. 0123, Cohen). The microprocessor and disclosed display are considered to anticipate the claimed configuration because both sample the input signal and use a value at each sampling time point to process and display.

With reference to claims 3-6, Cohen is considered to disclose:

The step of setting a second threshold value higher than the first threshold value if the first threshold value is reached in a prior attempt to move the impaired muscle sending an electric current to an electrode in contact with the individual's skin to cause muscle contraction if the strength of the electrical signal is larger than a first threshold value (see col. 9, para. 0079 and col. 9, para. 0080, Cohen). The disclosed method of sending electric current is considered to anticipate the claimed method because both methods teach the programming of the microprocessor with an algorithm to recognize whether an impulse exceeds a specific threshold and if an impulse exceeds the threshold value, a current is sent to the electrodes causing the muscle to contract.

Referring to claims 10, 14, 15, 18, and 19, Cohen is considered to disclose the step of recording the data received and transmitted by said microprocessor and comprising a memory means for storing information obtained by said microprocessor (see col. 5, para. 0031, Cohen). The disclosed step is considered to anticipate the

claimed step because both implement a programmable microprocessor adapted to control stimulus applied to individual electrodes.

Referring to claims 11 and 20, Cohen is considered to disclose the step of reducing electrical noise by incorporating a floating, amplified grounding device (see col. 19, para. 0149, Cohen). The disclosed grounding device is considered to anticipate the claimed grounding device because both act to reduce electrical noise disturbance.

With reference to claim 12, Cohen is considered to disclose:

at least two sensors for detecting electrical signals within a muscle (see col. 4, para. 027, Cohen). The disclosed sensors are considered to anticipate the claimed sensors because both sensors detect stimulus affecting the senses;

said sensors in physical contact with a portion of skin near the muscle;

said sensors in electrical contact with a microprocessor (see col. 4, para 0031, Cohen). The disclosed sensors are considered to anticipate the claimed sensors because both can receive the signal via indirect or direct contact between the sensor and microprocessor;

said microprocessor capable of deciphering from a pattern of said electrical signals whether or not an attempt to move said muscle has been made (see col. 1, para. 005, Cohen). The disclosed microprocessor is considered to anticipate the claimed device because both devices attempt to contract an impaired muscle, which can be detected by picking up an electrical signal/impulse at the location of the muscle;

said microprocessor capable of communicating with a display device; said microprocessor capable of setting a threshold values after every attempt to move the

muscle; (see col. 5, para. 0031 and col. 12, para. 0123, Cohen). The microprocessor and disclosed display are considered to anticipate the claimed configuration because both sample the input signal and use a value at each sampling time point to process and display;

said threshold value used to determine when the strength of said attempt is sufficient to warrant a reward (see col. 13, para. 0126, Cohen); and

said reward in the form of an electrical current sent from said microprocessor to said sensors for causing a visible muscle contraction (see col. 14, para. 0129, Cohen). The disclosed result of specified motion is considered to anticipate the claimed reward of ultimate muscle contraction because both occur as a direct result of electrical stimulus processed and sent to the sensors.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9 and 13 stand rejected under 35 U.S.C. §103(a) over Cohen in view of Gesotti (US 6,704,603 B1, hereinafter "Gesotti"). Cohen is considered to disclose the claimed invention as discussed above, under the anticipatory rejection, except for the claimed visual, sensory and auditory cues. However, Gesotti teaches the claimed cues (see col. 15, ln. 10-15, Gesotti). It would be obvious to one of ordinary skill in the art to

combine the teachings of Cohen and Gesotti for the purpose of prompting the specific muscle movement and activities.

Claims 21-24 stand rejected under 35 U.S.C. §103(a) over Cohen. Cohen discloses the claimed invention except for the means for detecting electrical impulses of about 0.2 to about 2000  $\mu$ V and means for sampling an electrical signal at least 3000 times per second. It would have been obvious to one having ordinary skill in the art at the time the invention was made to detect electrical impulses in that range and to sample signals that often, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (see *In re Aller*, 105 USPQ 233).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana D. Greene whose telephone number is (571) 272-7138. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dana D. Greene



George Manuel  
Primary Examiner